

REMARKS

The present Amendment amends claims 1, 3, 9, 10, and 13, leaves claims 7, 11 and 12 unchanged, cancels claims 2, 4-6 and 8, and adds new claims 14 and 15. Therefore, the present application has pending claims 1, 3, 7 and 9-15.

Specification

The disclosure stands objected to due to informalities noted by the Examiner. Specifically, the Examiner alleges that the specification fails to provide proper antecedent basis for the claimed subject matter (i.e., "chronological correspondence", as recited in the claims). Where appropriate, Applicants have amended the claims to overcome this objection. Therefore this objection should be withdrawn.

35 U.S.C. §101 Rejections

Claims 1-10 stand rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. This rejection is traversed for the following reasons. Applicants submit that claims 1-10, as now more clearly recited, are directed to statutory subject matter. More specifically, Applicants have amended claims 1 and 3 to include the Examiner's recommendations of adding a step of displaying and adding that the program is embodied in a computer readable medium. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

35 U.S.C. §103 Rejections

Claims 1-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. 09-149894: *English Computer Translation from the*

Patent Abstracts of Japan to Atsushi in view of U.S. Patent No. 5,944,530 to Ho et al. ("Ho"). As previously indicated, claims 2, 4-6 and 8 were canceled. Therefore, this rejection regarding claims 2, 4-6 and 8 is rendered moot. This rejection regarding the remaining claims 1, 3, 7 and 9-13 is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claims 1, 3, 7 and 9-13, are not taught or suggested by Atsushi or Ho, whether taken individually or in combination with each other in the manner suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more clearly recite that the present invention is directed to a learning condition judging program and a system as recited, for example, in independent claims 1, 3 and 13.

The present invention, as recited in claim 1, and a similarly recited in claims 3 and 13, provides a learning condition judging program, which is embodied on a computer readable medium, and is executable in an information processing apparatus connected to a near infrared measuring device. The program is operable on the information processing apparatus to perform a step of starting a learning program in the information processing apparatus. The program is also operable on the information processing apparatus to perform a step of continuously acquiring, as the learning program progresses, measurement information of a blood flow rate in a brain of a user of the information processing apparatus, the measurement

information being obtained from the near infrared measuring device through an information acquiring means. The program is further operable on the information processing apparatus to perform a step of acquiring input information and operation information given by the user to the information processing apparatus through input means, where the input information and the operation information indicate progress of the learning program. Furthermore, the program is operable on the information processing apparatus to perform a step of acquiring audio or video information of the user of the information processing apparatus, so as to obtain attention information of the user through at least one of a microphone and a camera connected to the information processing apparatus. The program is also operable on the information processing apparatus to perform steps of judging a degree of concentration of the user on the learning program, using the measurement information, and displaying the degree of concentration of the user and the attention information of the user with the progress of the learning program. The prior art does not teach or suggest all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Atsushi or Ho, whether taken individually or in combination with each other.

Atsushi teaches a living body input device and living body controller using an optical living body measurement method. However, there is no teaching or suggestion in Atsushi of the learning condition judging program executable in an information processing apparatus and a system for judging a learning condition, as

recited in claims 1, 3 and 13 of the present invention.

Atsushi discloses a device and method for measuring localized brain functions to control a computer, a game, an environment controller, a learning level judgment device, a vehicle alarm, medical diagnostic and alarm devices, a lie detector, an intention display device, and an information transmitter, etc. The device includes an optical brain function measurement device, which is attached to a user by use of optical fibers for irradiation and convergence. The head part transmission light intensity of respective measurement areas measured by the optical brain function measurement device is input to an arithmetic unit. The arithmetic unit uses the head part transmission light intensity of the respective measurement areas and the absorption coefficient of oxidized and reduced hemoglobin stored in a storage device to determine output signals. The output signals are input to an external device, which performs an operation corresponding to the type of signal input to the external device.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 3 and 13, includes acquiring audio or video information of the user of the information processing apparatus, so as to obtain attention information of the user through at least one of a microphone and a camera connected to the information processing apparatus. Atsushi does not disclose this feature, and the Examiner does not rely upon Atsushi for teaching acquiring audio or video information through at least one of a microphone and a camera connected to the information processing apparatus (see rejection of claim 2 on page 4 of Office Action). As described in paragraph [0001], Atsushi is directed to the control of a

device without the use of an input means, such as a keyboard or a mouse. An object of Atsushi is to control a device by using measured localized brain functions of a user, rather than using conventional input means. Therefore, Atsushi teaches away from using conventional input means, but rather uses electrodes attached to the head of a user (see, e.g., Drawings 1, 6 and 10). Accordingly, as conceded by the Examiner, Atsushi does not disclose acquiring audio or video information through at least one of a microphone and a camera connected to the information processing apparatus, as claimed. Applicants submit that because Atsushi teaches away from using conventional input means, Atsushi does not teach or suggest the claimed feature.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 3 and 13, includes judging a degree of concentration of the user on the learning program using the measurement information. Atsushi does not disclose this feature, and the Examiner does not rely upon Atsushi for teaching judging a degree of concentration.

Therefore, Atsushi fails to teach or suggest “acquiring audio or video information of said user of said information processing apparatus so as to obtain attention information of said user through at least one of a microphone and a camera connected to said information processing apparatus” as recited in claim 1, and as similarly recited in claims 3 and 13.

Furthermore, Atsushi fails to teach or suggest “judging a degree of concentration of said user on said learning program using said measurement information” as recited in claim 1, and as similarly recited in claims 3 and 13.

The above noted deficiencies of Atsushi are not supplied by any of the other references of record, namely Ho, whether taken individually or in combination with each other. Therefore, combining the teachings of Atsushi and Ho in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Ho teaches a learning method and system that considers a student's concentration level. However, there is no teaching or suggestion in Ho of the learning condition judging program executable in an information processing apparatus and a system for judging a learning condition, as recited in claims 1, 3 and 13 of the present invention.

Ho discloses a computer-aided-educational method and system that considers a student's concentration level when teaching the student. The system monitors automatically more than once the student's concentration-sensitive behavior while the student is working on the study materials. Through monitoring the student's volitional or involuntary behavior, the system provides an indication on the student's concentration level. Based on the indication, the system reacts accordingly. Reactions include, for example, providing rewards, punishments, and stimulation, or changing the study materials. The system can also react by asking the student a question to stimulate the student or to assess the student's level of understanding. Based on the student's response, the system may change to more appropriate study materials, or a more appropriate presentation style.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 3 and 13, includes acquiring audio or video information of the user of the information processing apparatus, so as to obtain attention information of the user through at least one of a microphone and a camera connected to the information processing apparatus. Applicants submit that it would not be obvious to combine Atsushi and Ho because Atsushi teaches away from the present invention. The Examiner is reminded of MPEP 2145(X)(D)(2), which provides:

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.).

As previously discussed, Atsushi clearly teaches away from using input means such as a microphone and a camera, as claimed, because Atsushi is directed to eliminating the need for such input means. As such, one of ordinary skill in the art would not be motivated to combine Ho with Atsushi.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 3 and 13, includes judging a degree of concentration of the user on the learning program using the measurement information. Ho does not disclose this feature. To support the assertion that Ho teaches judging a degree of concentration, the Examiner cites the abstract of Ho (see, e.g., the rejection of claim 3 on page 6 of the Office Action). However, neither the cited text nor any other portions of Ho teach or suggest the claimed feature. As described in the abstract, Ho teaches where the system provides an indication on

the student's concentration level "[t]hrough monitoring the student's volitional or involuntary behavior." This is quite different from the present invention, where a user's degree of concentration is determined by using the measurement information, where the measurement information is previously claimed as "a blood flow rate in a brain of a user." Accordingly, Ho does not teach judging a degree of concentration, as claimed.

Therefore, Ho fails to teach or suggest "acquiring audio or video information of said user of said information processing apparatus so as to obtain attention information of said user through at least one of a microphone and a camera connected to said information processing apparatus" as recited in claim 1, and as similarly recited in claims 3 and 13.

Furthermore, Ho fails to teach or suggest "judging a degree of concentration of said user on said learning program using said measurement information" as recited in claim 1, and as similarly recited in claims 3 and 13.

Both Atsushi and Ho suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Atsushi and Ho in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 3, 7 and 9-13 as being unpatentable over Atsushi in view of Ho are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1, 3, 7 and 9-13.

New Claims 14 and 15


Claims 14 and 15 were added to more clearly recited features of the present invention. Claims 14 and 15 are dependent on claim 1. Therefore, dependent claims 14 and 15 are allowable for at least the reasons discussed previously regarding independent claim 1.

In view of the foregoing amendments and remarks, Applicants submit that claims 1, 3, 7 and 9-15 are in condition for allowance. Accordingly, early allowance of claims 1, 3, 7 and 9-15 is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.42880X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.


Donna K. Mason
Registration No. 45,962

DKM/cmd
(703) 684-1120